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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,835

05/01/2006

Bernd Biehlman

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10/11/2007

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D-70032 STUTTGART,
GERMANY

EXAMINER

NGUYEN, NGA X

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,835	Applicant(s) BIEHLMAN ET AL.	
	Examiner NGA X. NGUYEN	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/01/2006</u> | 6) <input type="checkbox"/> Other: ____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gottwald (7268722) in view of Oswald (US 2004/0119633).

With regard to claim 11, 14, 22 & 23, Gottwald discloses an antenna system having a desired overall directional dependence:

- Having at least one 1st and 2nd partial antenna (see column 2, lines 10-15).
- The 1st and 2nd partial antenna being disposed relative to each other in such a manner that individual directional dependences of the 1st and 2nd at least partially overlap (see column 2, lines 26-39).
- The first partial antenna has a first antenna signal, which represents a radio signal for receiving/transmitting antenna (see Fig.3).
- The second partial antenna has a second antenna signal, which represents a radio signal for receiving/transmitting antenna (see Fig.3).
- Switching on and off is constructed to add or subtract the partial receiving antenna to have a third desired directional dependence through overlapping of individual directional dependences of the 1st and 2nd partial antenna (see Fig.3 & 7, column 2, lines 40-48).

Art Unit: 3662

Gottwald is silent on the cyclically alternating operation of the 1st and 2nd partial antennas. Oswald teaches a method of obtaining positional information about one or more objects in a detection field:

- Cyclically alternating operation of the 1st and 2nd partial antennas (see page 19, paragraph 347).
- The third antenna signal being constructed through mathematical linking of the 1st and 2nd antenna signals (see page 19, paragraph 347-348).

It would have been obvious to modify Gottwald by incorporating the teaching of Oswald's device to cycling operation and generating a third signal through mathematical linking of the 1st and 2nd antenna so as to have a desired overall direction dependence.

With regard to claim 12, Gottwald teaches that the second partial antenna is generated from the 1st partial antenna by connecting at least one additional antenna element to the 1st partial antenna (see column 2, lines 26-39).

With regard to claim 13, Gottwald teaches a frequency for switching between the 1st and 2nd partial antennas is selected in accordance with dynamics of the radio signals to be sufficiently large such that each of the 1st and 2nd partial antennas can equally receive similar parts of the radio signal (see column 2-3, lines 49-9).

With regard to claim 15, Gottwald teaches that the control means constructed the second partial antenna by operating the 1st partial antenna along with simultaneous operation of at least one additional element (see column 2, lines 53-64).

With regard to claim 16-18, Gottwald teaches the 1st partial antenna comprises a plurality of antenna elements disposed in a 1st row and the 2nd partial antenna

Art Unit: 3662

comprises a plurality of antenna elements disposed in a 2nd row (see column 2, lines 10-15).

With regard to claim 19, Gottwald teaches that the 1st and 2nd rows are disposed parallel to each other (see Fig. 9).

With regard to claim 20, Oswald teaches that the 1st and 2nd rows of antenna elements have a mutual separation of half wavelength (see page 23, paragraph 409).

With regard to claim 21, Oswald teaches that the antenna system is a micro-strip antenna (see page 25-26, paragraph 447-451).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGA X. NGUYEN whose telephone number is 571-272-5217. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARCZA H. THOMAS can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NGA X NGUYEN
Examiner
Art Unit 3662

NXN



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